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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,026	02/26/2002	Paul S. Odom	002-US-009	2690

29664 7590 07/14/2004

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EXAMINER	
LY, ANH	

ART UNIT	PAPER NUMBER
2172	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/086,026	ODOM ET AL.	
	Examiner	Art Unit	
	Anh Ly	2172	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/26/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is response to Applicants' Communications filed on 02/26/2002.

2. Claims 1-48 are pending in this application.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-7, 9-15 and 16-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,745,776 issued to Sheppard, II (hereinafter Sheppard) in view of US Patent No. 6,678,694 issued to Zimmermann et al. (hereinafter Zimmermann).

With respect to claim 1, Sheppard discloses the claimed features determining a segment-level actual usage value for one or more word combinations (identifying the segment actual of the word list including topic list words: col. 5, lines 42-65); and

designating a word combination as a topic if the segment-level actual usage value of the word combination is substantially greater than the segment-level expected usage value of the word combination (manipulating the value of word combinations in the database storing the topic words that are corresponding to the topic entries having the highest frequency rating and frequency count: col. 7, lines 42-67 and col. 8, lines 1-67).

Sheppard teaches database of entries including entries and topic entries and each topic entry has a topic word, words and word combination (col. 3, lines 40-48, abstract). Segments such as sentences, pronunciations (see fig. 2, col. 3, lines 30-35). A list of topics from which the users enable or determine the topic or segment of words or word combinations (col. 5, lines 12-20 and fig. 3) and displaying a list of topic and it would repeat until all topics in the list are identified (see fig. 10, col. 7, lines 48-67 and col. 11, lines 1-30). Sheppard does not explicitly teach a segment-level expected usage value for each of the one or more word combinations.

However, Zimmermann teaches analysis and categorization of the words or word combinations of the topics as well as the number of occurrences of the word pairs (col. 3, lines 45-58 and col. 8, lines 17-61; also see fig. 2).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard with the teachings of Zimmermann. The motivation being to have a database such as a dictionary storing topic entries from one or more topics wherein each topic entry includes a topic word and the list of topic is displayed to the requestor and wherein the requestor is granted access to the result set to which topics designated by the requestor have been assigned.

With respect to claims 2-5, Sheppard discloses a method for identifying the topics as discussed in claim 1. Also Sheppard teaches header of word or topic or context (col. 5, lines 52-65 and col. 6, lines 40-52).

Sheppard teaches database of entries including entries and topic entries and each topic entry has a topic word, words and word combination (col. 3, lines 40-48, abstract). Segments such as sentences, pronunciations (see fig. 2, col. 3, lines 30-35). A list of topics from which the users enable or determine the topic or segment of words or word combinations (col. 5, lines 12-20 and fig. 3) and displaying a list of topic and it would repeat until all topics in the list are identified (see fig. 10, col. 7, lines 48-67 and col. 11, lines 1-30). Sheppard does not explicitly teach wherein each of the plurality of segments comprises a portion of a document, wherein the portion of a document

comprises a paragraph, wherein the portion of a document comprises a heading and wherein the portion of a document comprises the entire document.

However, Zimmermann teaches document, and documents and paragraph and document titles (see abstract, col. 1, lines and col. 4, lines 58-67 and col. 5, lines 1-14; and col. 6, lines 34-43).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard with the teachings of Zimmermann. The motivation being to have a database such as a dictionary storing topic entries from one or more topics wherein each topic entry includes a topic word and the list of topic is displayed to the requestor and wherein the requestor is granted access to the result set to which topics designated by the requestor have been assigned.

With respect to claim 6, Sheppard teaches wherein each of the one or more word combinations comprise two or more substantially contiguous words (words in the phrases: col. 3, lines 40-48, col. 8, lines 48-67 and col. 9, lines 1-41).

With respect to claim 7, Sheppard teaches wherein two words are substantially contiguous if they are separated only by zero or more words selected from a predetermined list of words (the list of topic word: col. 5, lines 42-65).

With respect to claim 9, Sheppard teaches wherein at least one word in each of the one or more word combinations is selected from a predetermined list of words (the list of topic word: col. 5, lines 42-65).

With respect to claim 10, Sheppard teaches wherein the predetermined list of words comprise a list of domain specific words (the list of topic word: col. 5, lines 42-65).

With respect to claims 11-15, Sheppard discloses a method for identifying the topics as discussed in claim 1. Sheppard teaches manipulating the value of word combinations in the database storing the topic words that are corresponding to the topic entries having the highest frequency rating and frequency count: col. 7, lines 42-67 and col. 8, lines 1-67) and identifying the segment actual of the word list including topic list words: col. 5, lines 42-65).

Sheppard teaches database of entries including entries and topic entries and each topic entry has a topic word, words and word combination (col. 3, lines 40-48, abstract). Segments such as sentences, pronunciations (see fig. 2, col. 3, lines 30-35). A list of topics from which the users enable or determine the topic or segment of words or word combinations (col. 5, lines 12-20 and fig. 3) and displaying a list of topic and it would repeat until all topics in the list are identified (see fig. 10, col. 7, lines 48-67 and col. 11, lines 1-30). Sheppard teaches the frequency rating from which it is used to determine the statistics of frequency count. Sheppard does not explicitly teach determining the number of segments in the data corpus the word combination is in, the number of words in the word combination, "N" represents the number of segments in the data corpus, designating a word combination as a topic if the segment-level actual usage value of the word combination is greater than approximately twice the segment-

level expected usage value of the word combination, wherein the act of designating a word combination as a topic, comprises designating a word combination as a topic if the segment-level actual usage value of the word combination is greater than a specified value and wherein the act of designating a word combination as a topic, comprises designating a word combination as a topic if the segment-level actual usage value of the word combination is greater than approximately 10.

However, Zimmermann teaches number of segment of a document such as paragraph, sentence (col. 1, lines 50-67 and col. 2, lines 1-32), set of documents having word to be stored in word combination table, also word table and topic table (see fig. 2 and fig. 3, col. 3, lines 40-58, and col. 8, lines 18-67) and statistics analysis for the document based on the words or word combination in the document is defined: number of words is in proportion to the size of the document and that if the frequency of occurrences of a particular word divided by the document size and measuring of the word or document size based on the threshold value (col. 14, lines 5-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard with the teachings of Zimmermann. The motivation being to have a database such as a dictionary storing topic entries from one or more topics wherein each topic entry includes a topic word and the list of topic is displayed to the requestor and wherein the requestor is granted access to the result set to which topics designated by the requestor have been assigned.

Claim 16 is essentially the same as claim 1 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 1 hereinabove.

Claim 17 is essentially the same as claim 2 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 2 hereinabove.

Claim 18 is essentially the same as claim 3 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 3 hereinabove.

Claim 19 is essentially the same as claim 5 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 5 hereinabove.

Claim 20 is essentially the same as claim 6 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 6 hereinabove.

Claim 21 is essentially the same as claim 7 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 7 hereinabove.

Claim 22 is essentially the same as claim 9 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 7 hereinabove.

Claim 23 is essentially the same as claim 10 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 10 hereinabove.

Claim 24 is essentially the same as claim 11 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 11 hereinabove.

Claim 25 is essentially the same as claim 12 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 12 hereinabove.

Claim 26 is essentially the same as claim 13 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 13 hereinabove.

Claim 27 is essentially the same as claim 14 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 14 hereinabove.

Claim 28 is essentially the same as claim 15 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 15 hereinabove.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,745,776 issued to Sheppard, II (hereinafter Sheppard) in view of US

Patent No. 6,678,694 issued to Zimmermann et al. (hereinafter Zimmermann) and further in view of US Patent No. 6,446,061 issued to Doerre et al. (hereinafter Doerre).

With respect to claim 8, Sheppard in view of Zimmermann discloses a method for identifying topics as discussed in claim 1.

Sheppard and Zimmerman disclose substantially the invention as claimed. However, Sheppard and Zimmermann do not teach wherein the predetermined list of words comprises STOP words.

However, Doerre teaches a corpus having stop words (col. 18, lines 5-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard in view of Zimmermann with the teachings of Doerre by incorporating the use of a predetermined list of words comprises stop words. The motivation being to increase the cluster coherence at the expense of meaningful cluster descriptors, thereby removing high frequency terms and very low frequency terms.

7. Claims 29-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,745,776 issued to Sheppard, II (hereinafter Sheppard) in view of US Patent No. 6,038,560 issued to Wical.

With respect to claim 29, Sheppard teaches the result set identifying a plurality of stored data items (dictionary database containing a plurality of words, which are entries or topic entries (see fig. 2, col. 4, lines 27-60);

identifying those topics associated with the stored data items identified in the result set (identifying the segment actual of the word list including topic list words: col. 5, lines 42-65);

selecting for display a topic associated with the most identified stored data items (user selecting the word or topic word, see fig. 3, col. 5, lines 12-65);

selecting for display another topic, said another topic associated with the most identified stored data items not associated with a previously identified display topic, wherein this step is repeated until all identified stored items in the result set have been accounted for (see fig.3 and fig. 10, the loop for accessing the topic word until all identified topic word entries are accessed: col. 7, lines 48-67 and col. 8, lines 1-67); and

displaying the selected display topics (see fig. 9 and col. 5, lines 15-22 and col. 7, lines 42-48).

Sheppard teaches database of entries including entries and topic entries and each topic entry has a topic word, words and word combination (col. 3, lines 40-48, abstract). Electronic dictionary contains entries as data items. A list of topics from which the users enable or determine the topic or segment of words or word combinations (col. 5, lines 12-20 and fig. 3) and displaying a list of topic and it would repeat until all topics

in the list are identified (see fig. 10, col. 7, lines 48-67 and col. 11, lines 1-30). Sheppard does not explicitly teach identifying a result set based on an initial user query.

However, Wical teaches user query to the search and retrieval system to get the search result which identifies categories and documents (see fig. 1 and col. 5, lines 28-58).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard with the teachings of Wical by incorporating the use of user query to identify the search result by displaying terminology related to the query to the search and retrieval systems including a classification system. The motivation being to display the result from the search and retrieval systems into several classifications based on the terminology relevant to one or more terms of the input query and from which the user may view the terminology to learn different contexts for the query.

With respect to claims 30-32, Sheppard discloses a method for displaying a list of topics as discussed in claim 29. Also Sheppard teaches the percentage of selection for ranking of topic word (col. 3, lines 62-67 and col. 4, lines 1-15).

Sheppard teaches database of entries including entries and topic entries and each topic entry has a topic word, words and word combination (col. 3, lines 40-48, abstract). Electronic dictionary contains entries as data items. A list of topics from which the users enable or determine the topic or segment of words or word combinations (col. 5, lines 12-20 and fig. 3) and displaying a list of topic and it would repeat until all topics

in the list are identified (see fig. 10, col. 7, lines 48-67 and col. 11, lines 1-30). Sheppard does not explicitly teach identifying an initial user query.

However, Wical teaches user query to the search and retrieval system to get the search result which identifies categories and documents (see fig. 1 and col. 5, lines 28-58).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard with the teachings of Wical by incorporating the use of user query to identify the search result by displaying terminology related to the query to the search and retrieval systems including a classification system. The motivation being to display the result from the search and retrieval systems into several classifications based on the terminology relevant to one or more terms of the input query and from which the user may view the terminology to learn different contexts for the query.

With respect to claim 33, Sheppard teaches wherein the ad of identifying those topics associated with the stored data items identified in the result set, comprises generating a list of unique topics associated with the identified stored data items (database of entries including general entries and topic entries and each entry is a data items: abstract and this dictionary is a unique entry, see fig. 10 and 11 and col. 7, lines 42-48).

With respect to claim 34, Sheppard teaches removing from the generated

list those topics that are associated with more than a specified fraction of the identified stored data items (eliminating the less important words from the topic entries stored in the database: col. 8, lines 31-67 and col. 9, lines 1-41).

With respect to claim 35, Sheppard teaches wherein the act of removing comprises removing from the generated list those topics that are associated with more than approximately eight-percent (80%) of the identified stored data items (eliminating the less important words from the topic entries stored in the database: col. 8, lines 31-67 and col. 9, lines 1-41 and the percentage of selection for ranking of topic word: col. 3, lines 62-67 and col. 4, lines 1-15).

With respect to claim 36, Sheppard teaches displaying a selected number of stored data item identifiers (see fig. 3 and 10, col. 7, lines 55-67 and col. 8, lines 1-30).

With respect to claim 37, Sheppard discloses a method for displaying a list of topics as discussed in claim 29. Also Sheppard teaches the displaying of topic word (see figs 5 and fig. 9).

Sheppard teaches database of entries including entries and topic entries and each topic entry has a topic word, words and word combination (col. 3, lines 40-48, abstract). Electronic dictionary contains entries as data items. A list of topics from which the users enable or determine the topic or segment of words or word combinations (col. 5, lines 12-20 and fig. 3) and displaying a list of topic and it would repeat until all topics in the list are identified (see fig. 10, col. 7, lines 48-67 and col. 11, lines 1-30). Sheppard does not explicitly teach wherein the ad of displaying a selected number of stored data item identifiers, comprises displaying a hyperlink.

However, Wical teaches hypertext link as shown in figs 10 and 11 (col. 24, lines 55-67 and col. 25, lines 25-55).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Sheppard with the teachings of Wical by incorporating the use of user query to identify the search result by displaying terminology related to the query to the search and retrieval systems including a classification system. The motivation being to display the result from the search and retrieval systems into several classifications based on the terminology relevant to one or more terms of the input query and from which the user may view the terminology to learn different contexts for the query.

With respect to claim 38, Sheppard teaches wherein the act of selecting for display another topic, comprises determining when the number of data items not associated with a previously identified display topic is less than a specified value and, when this is true: generating a list of unique individual words from the topics not yet selected for display, selecting for display a unique word from the list of unique individual words associated with the most identified stored data items; and selecting for display another unique word from the list of unique individual words, said another unique word associated with the most identified stored data items not associated with a previously identified display topic and unique word, wherein this step is repeated until all identified stored items in the result set have been accounted for (see fig. 2, col. 4, lines 27-60; identifying the segment actual of the word list including topic list words: col. 5, lines 42-65; user selecting the word or topic word, see fig. 3, col. 5, lines 12-65; see fig.3 and fig.

10, the loop for accessing the topic word until all identified topic word entries are accessed: col. 7, lines 48-67 and col. 8, lines 1-67; and see fig. 9 and col. 5, lines 15-22 and col. 7, lines 42-48).

Claim 39 is essentially the same as claim 29 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 29 hereinabove.

Claim 40 is essentially the same as claim 30 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 30 hereinabove.

Claim 41 is essentially the same as claim 31 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 31 hereinabove.

Claim 42 is essentially the same as claim 32 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 32 hereinabove.

Claim 43 is essentially the same as claim 33 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 33 hereinabove.

Claim 44 is essentially the same as claim 34 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 34 hereinabove.

Claim 45 is essentially the same as claim 35 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 35 hereinabove.

Claim 46 is essentially the same as claim 36 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 36 hereinabove.

Claim 47 is essentially the same as claim 37 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 37 hereinabove.

Claim 48 is essentially the same as claim 38 except that it is directed to a program storage device rather than a method, and is rejected for the same reason as applied to the claim 38 hereinabove.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ly whose telephone number is 703 306-4527 or via E-Mail: ANH.LY@USPTO.GOV. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on 703 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703 746-7239.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: Central Fax Center (703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Fourth Floor (receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-6606 or 703 305-3900.

JEAN M. CORRIELUS
PRIMARY EXAMINER

ANH LY
JUL. 8th, 2004